

(FIGURE 4)

ABSTRACT**OPTICAL IRRADIATION DEVICE**

An optical irradiation device incorporating a cluster of LEDs (11, 43) arranged so that shaped facets of adjacent LEDs come together to increase the packing density of LEDs in the cluster. A light guide (41) collects light emitted by the LEDs. Two or more light guides (41) and LED clusters (43) may be arranged in series to produce a single light beam. A heat pipe (45) is provided to conduct heat away from the LEDs (43). The heat pipe (56) may be annular and contain an inner storage space for batteries (60) or the like.